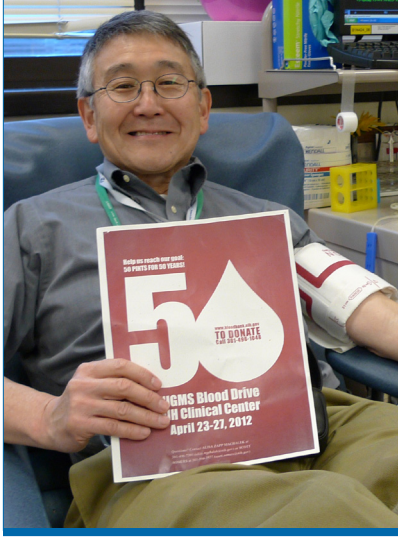


nih record



ABOVE • NIGMS has found novel ways of marking its 50th birthday. See story below.

features

Porter II Enters Late Phase of Construction

1

Kinyoun and Straus Lectures Set

3

OSE Hosts New Science Education Series

9

Troop Resilience Is Subject of Sept. 20 Talk

12

departments

Briefs

2

Digest

10

Behind the 'Curtain Wall'

Porter II Construction Pressing Toward Finish Line

By Carla Garnett

Casual onlookers will no longer be able to view new developments in the biggest construction project on campus. That's because the second phase of Bldg. 35 (a.k.a. Porter Neuroscience Research Center II) is now behind its "curtain wall," otherwise known in construction lingo as the envelope or closing.

"Most of the construction activities are now happening within the exterior walls of the building, and for the most part, can't be seen from outside," said Frank Kutlak,

PNRC II project officer/architect, Office of Research Facilities.

There are five major phases of construction: excavation, structural systems, closing or envelope, mechanical/electrical/plumbing (MEP) systems and finishes, he explained. Porter II

SEE PORTER II, PAGE 6



Porter II construction is proceeding apace, both inside and out.

NIGMS at 50: Investing in Discovery

By Alisa Zapp Machalek

What do the Rolling Stones, James Bond movies and NIGMS have in common? They all started in 1962 and are still going strong.

After a half-century of supporting basic, non-disease-targeted research and training, NIGMS is reflecting on the many ways it has increased understanding of fundamental biological processes and disease mechanisms. It is also looking to the future, as indicated by its anniversary theme: "investigate, innovate, inspire."

NIGMS grantees focus on discovering how cells communicate with each other and their environment, how genes are regulated and how proteins accomplish their varied tasks in the body. This knowledge forms the foundation for new and better ways to improve health and treat or prevent disease.

Advances made with institute support include:

▼ Discovering a gene-silencing process called RNA interference, or RNAi, that is both a pow-

Elects 'Niagara Falls' Trajectory

Berman Shows How To Bridge Gap to Patient-Centered Care

By Christine Guilfooy

A lot has changed since Amy Berman saw a strange-looking red bump on her breast 21 months ago.

She has been diagnosed with stage IV inflammatory breast cancer, has opted for palliative care and—knowing that only 11 percent of people with her diagnosis live beyond 5 years—prepared herself and her family.

Here is one thing that has not changed: Berman feels fine. She has remained well enough to climb the Great Wall of China and, although her cancer had already spread to her spine when she was diagnosed, it has not continued to spread.

Berman spoke at NIH recently as part of the

SEE BERMAN, PAGE 8





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NIH...Turning Discovery Into Health

briefs

APAO Solicits Awards Nominations

The NIH Asian & Pacific Islander American Organization (APAO) will continue its tradition of honoring employees in the NIH Asian Pacific American community for their excellence. Nominations are solicited for two categories: significant accomplishments in biomedical research and leadership excellence promoting diversity to make NIH and government a better workplace for all. Awardees will be honored at a holiday luncheon at noon on Dec. 10 in Wilson Hall, Bldg. 1.

Submit a 1-page narrative/statement to support why you think an individual deserves recognition and include a CV of the nominee. A review committee composed of members from APAO representing several ICs will evaluate the nominations in the categories of Scientific Achievement Award and Leadership Excellence Award. Submit your nominations electronically no later than COB on Friday, Oct. 5 to Dr. Xinzhi Zhang (Xinzhi.Zhang@nih.gov) and Dr. Sally Hu (HuS@od.nih.gov).

For more information about the awards and criteria, visit www.recgov.org/r&w/apao or contact Dr. Rashmi Gopal-Srivastava, chair of the APAO awards committee (Rashmi.Gopal-Srivastava@nih.gov).

Infant Mortality Awareness 5K, Sept. 27

This year marks the 50th anniversary of the founding of the Eunice Kennedy Shriver National Institute of Child Health and Human Development. In recognition of the many contributions NICHD research has made in improving the health of families, the third annual NICHD 5K Run/Walk/Roll event welcomes all HHS staff and families interested in participating. This event will be held in front of Bldg. 1 on Thursday, Sept. 27, starting at 11:30 a.m. September is National Infant Mortality Awareness month; the event seeks to raise awareness about the problem and highlight current research issues as well as efforts to further reduce infant mortality in the United States.

Principles of Clinical Research Class

Registration for the 2012-2013 "Introduction to the Principles and Practice of Clinical Research" is now open. The course will run from Oct. 16 through Mar. 26, 2013. The deadline for registering is Oct. 9. Classes will be held on campus on Monday and Tuesday evenings from 5 to 6:30. There is no charge for the course but purchase of a textbook is suggested. A certificate will be awarded upon successful completion of the course, including a final exam. For more information or to register, visit www.cc.nih.gov/training/training/ippcr/application.html or call (301) 496-9425.

International Expo Set for Sept. 28

The 8th NIH International Opportunities Expo and Career Fair is scheduled for Friday, Sept. 28 at Natcher Conference Center from noon to 4:30 p.m. The expo focuses on opportunities for postdoctoral fellows and graduate students interested in pursuing careers abroad. For details visit https://www.training.nih.gov/international_expo_2012.

Did You Know? NCI Communicates Cancer Statistics

Cancer statistics reveal noteworthy trends—for example, that the number of U.S. cancer survivors is increasing even as the number of cancer diagnoses drops—but such statistics are notoriously difficult to explain to lay audiences. NCI recently launched the "Did You Know?" (DYK) series of animated videos to communicate key cancer statistics to the public in an easily understood, meaningful way.

Scientists and communication specialists from NCI's Division of Cancer Control and Population Sciences and Office of Communications and Education collaboratively create the 90-second DYK videos, which are hosted on www.cancer.gov/statistics.

DCCPS scientists glean timely facts about cancer and its risk factors from dense, 100+ page statistical documents such as NCI's *Cancer Statistics Review*. The DYK production team distills this complex information into a "news you can use" message designed to raise public cancer awareness and promote healthy behaviors. The first animated DYK module *Melanoma of the Skin* debuted in May and has received over 1,800 views. Since then, modules for *Excess Weight and Cancer Risk* and *Cancer Survivorship* have been launched.

The DYK team plans to release new videos monthly based on cancer research news and in accordance with national cancer awareness months. Denise Buckley of DCCPS's Office of the Director recently congratulated the DYK team for "using [cancer statistics] in this new and innovative way to educate the public." Look for new modules on prostate, breast and lung cancers in the coming months.

Fifth Protocol Navigation Lecture Set, Oct. 1

The fifth lecture in the IRP Protocol Navigation Training Program Seminar Series will be held Monday, Oct. 1 from 1 to 2 p.m. in Bldg. 50, Conf. Rm. 1227/1328. The program is a trans-NIH effort to develop resources and tools and to provide training for intramural staff involved in protocol development, writing, coordination and management. Claire Driscoll, director of the NHGRI Technology Transfer Office, will discuss biomedical technology transfer as it relates to protocol navigation. For more information, contact Beverly Barham, (301) 594-2494, bbarham@mail.nih.gov, or Marcia Vital, (301) 451-9437, vitalm@mail.nih.gov.

nih record

Dybul To Discuss Framework for New Global Health Approach

Ambassador Mark R. Dybul will outline guiding principles for a new global health approach focused on the overall health of people and communities, rather than the eradication of specific diseases, during the 2012 Joseph J. Kinyoun Memorial Lecture. Titled "Reshaping Global Health: Translating Scientific Advances into Global Action," the NIAID-sponsored lecture will take place Tuesday, Oct. 2 at 2 p.m. in Lipsett Amphitheater, Bldg. 10.

Dybul co-directs the Global Health Law Program at Georgetown University's O'Neill Institute for National and Global Health Law, where he is also a distinguished scholar. He is also the inaugural global health fellow of the George W. Bush Institute.

As former U.S. global AIDS coordinator (2006 to 2009), Dybul oversaw the implementation of the President's Emergency Plan for AIDS Relief, one of the largest international health initiatives in history aimed at addressing a single disease. In his discussion of the future of global health, Dybul will examine the need to reconfigure the funding of global health programs to be more centralized, efficient, innovative, free of conflicts of interest and drawn equitably from local sources.

No stranger to NIH, Dybul came to NIAID in 1995 as a clinical associate in the Laboratory of Immunoregulation and, over time, assumed positions of increasing responsibility, culminating in his appointment as assistant director for medical affairs in the NIAID Office of the Director (2001-2009).

He received his medical degree from Georgetown University and completed a residency in internal medicine at the University of Chicago Medical Center.

NIAID established the Kinyoun Lecture series in 1979 to honor Dr. Joseph J. Kinyoun, who in 1887 founded the Laboratory of Hygiene, the forerunner of NIH, and began a new era of studying and fighting infectious diseases.



Herpesvirus Vaccine Expert To Give Straus Lecture, Sept. 20

Dr. Anne A. Gershon will deliver the fifth annual NIAID Stephen E. Straus Memorial Lecture on Infectious Diseases. Her lecture, "A Tale of Two Herpesvirus Vaccines," will be held on Thursday, Sept. 20, at 3 p.m. in Bldg. 40, Rm. 1201/1203. The lecture series honors Straus, who served NIAID for 30 years as a lab chief and senior investigator, continuing in the latter role after his appointment in 1999 as first director of NCCAM. He died in 2007.

Gershon is director of the division of pediatric infectious disease at Columbia University Medical Center. Her research has focused on the epidemiology, diagnosis, immunology, latency, prevention and treatment of the viral diseases varicella and zoster (commonly known as chickenpox and shingles, respectively). Her studies examining the safety and efficacy of the chickenpox vaccine in children and adults with leukemia were crucial to its licensure in 1995; the vaccine is now recommended for all healthy children in the United States.

Gershon's lecture will compare successful varicella-zoster virus (VZV) vaccines to a potential herpes simplex virus (HSV) vaccine. For many years, these herpesviruses were known to have very similar biological and molecular properties and some researchers believed that knowledge about the viruses was interchangeable. However, Straus pointed out in 1989 that because VZV and HSV infections differ in the severity of symptoms and the nature of recurrences, the immune system must respond to the two viruses in different ways. While VZV vaccines against chickenpox and shingles have been licensed for medical use, no safe and effective HSV vaccine is available despite several initially promising clinical trials. Gershon's lecture will include an overview of candidate HSV vaccines and predictions for their possible use.

Gershon was a member of the CDC's working group on the chickenpox vaccine and played a major role in recommending a second routine dose of the vaccine for all children. She is a member of the Councils of the Infectious Diseases Society of America (IDSA) and the Pediatric Infectious Diseases Society. She was president of IDSA in 2009.



NICHD Council Gains Four Members

NICHD director Dr. Alan Guttmacher (r) and NICHD deputy director Dr. Yvonne Maddox (l) recently welcomed four new members to the National Advisory Child Health and Human Development Council.

They are (from l) Diana W. Bianchi, vice chair for research, department of pediatrics, Tufts University School of Medicine; Dr. Paul H. Wise, Richard E. Behrman professor of child health and society, Stanford University; Dr. Bonnie M. Duran, associate professor, department of health services, University of Washington School of Public Health and Indigenous Wellness Research Institute, Seattle; and Dr. Ken Muneoka, John L. and Mary Wright Ebaugh chair in science and engineering, department of cell and molecular biology, Tulane University.





ANNIVERSARY

CONTINUED FROM PAGE 1

Above, l:

Acting NIGMS director Dr. Judith Greenberg (l) and NIGMS-supported Nobel laureates pose at a May event sponsored by FASEB to mark its 100th anniversary and NIGMS's 50th anniversary. The Nobelists are (starting second from l) Dr. Roderick MacKinnon, Rockefeller University; Dr. Andrew Fire, Stanford University School of Medicine; and Dr. Thomas Cech, University of Colorado, Boulder.

Above, r:

Now an assistant professor at the University of Pennsylvania, Dr. Elizabeth Grice was a postdoctoral fellow in the NIGMS Pharmacology Research Associate Program. While in this program, she conducted research on the skin microbiome in an NHGRI lab.

erful research tool and a promising approach for treating diseases.

✔ Revealing how a protein's shape affects its function, which plays a key role in health and disease and also informs the design of new drugs.

✔ Increasing survival from burn injury, in part by improving methods of wound care, nutrition and infection control.

✔ Explaining how genes affect the way a person responds to drugs, including those to treat cancer and prevent blood clots.

✔ Shedding light on the critical functions of carbohydrates, sugar molecules found on all living cells that are vital to fertilization, inflammation, blood clotting and viral infection.

✔ Modeling infectious disease outbreaks and

the impact of interventions through computer simulations, providing valuable information to public health policymakers.

✔ Developing new methods to look inside cells and other living systems.

The institute devotes most of its funds to investigator-initiated research grants in cell biology, biophysics, genetics, developmental biology, chemistry, pharmacology, computational biology and other fields. It also funds a limited number of research center grants in such areas as structural biology, chemistry, computational modeling, trauma and burn research, systems biology and biomedical technology. The important scientific resources it supports include the NIGMS Human Genetic Cell Repository and the Protein Data Bank.

Fast Facts About NIGMS

- Budget: \$2.4 billion, fourth largest at NIH
- Number of research grants: about 4,700
- Number of trainees: more than 4,300, about a quarter of the NIH total
- Number of Nobel laureates: 74, more than half of the NIH total; see www.nigms.nih.gov/GMNobelists.htm for a list.
- 50th anniversary web site: www.nigms.nih.gov/About/50Anniversary/

Distinguished Recent Directors

Dr. Ruth Kirschstein, 1974-1993

The longest-serving NIGMS director and the first woman to lead an NIH institute, she played a key role in shaping the institute's basic research and training mission.

Dr. Marvin Cassman, 1993-2002 (acting 1993-1996)

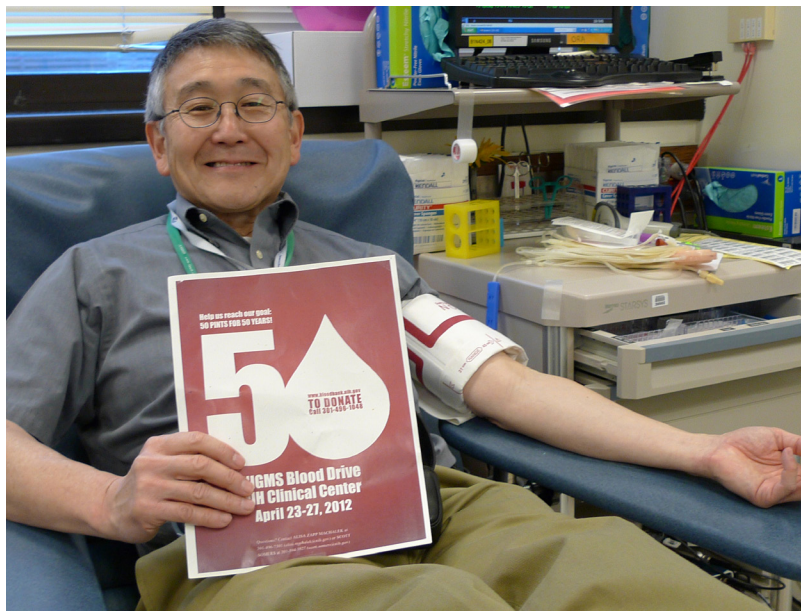
Under Cassman's leadership, NIGMS launched several major programs, including the Protein Structure Initiative and the Pharmacogenomics Research Network.

Dr. Jeremy Berg, 2003-2011

Berg promoted communication, transparency and dialogue with the scientific community through the *Feedback Loop* blog and other outreach efforts.

Dr. Judith Greenberg (acting), 2002-2003 and 2011-present

Greenberg oversaw the development of the institute's strategic plan issued in 2008 and its strategic plan for research training in 2011. She also led the NIH Director's Pioneer and New Innovator award programs.



At left, Dr. Richard Okita, one of the employees who participated in the NIGMS blood drive in April, displays the flyer promoting the activity while making his donation.

The most recent addition to NIGMS's activities in this area is the Institutional Development Award (IDeA) program, which builds research capacities in states that historically have had low levels of NIH funding. Formerly administered by NCRR, IDeA supports basic, clinical and translational research; faculty development; and infrastructure improvements in 23 states and Puerto Rico.

Marking the Milestone

One way that NIGMS is marking its golden anniversary is by sponsoring

The Biomedical Technology Research Center program, which was recently transferred to NIGMS from NCRR, marks its own 50th anniversary this year. The program has been responsible for harnessing technologies from the physical sciences—such as laboratory computers, synchrotron radiation, magnetic spin resonance and mass spectrometry—for use in biomedical research.

Commitment to Training, Workforce Development and Diversity

NIGMS has a longstanding commitment to training the next generation of scientists. Its programs stress approaches that cut across disciplinary and departmental lines to prepare trainees for creative research careers in a variety of areas.

Some, like the Medical Scientist Training Program, address particularly compelling needs—in this case, for investigators who hold the combined M.D.-Ph.D. degree and are well trained in basic science and clinical research. Others train scientists to conduct research in rapidly growing areas like biotechnology or at the interfaces between fields such as chemistry and biology or behavioral and biomedical sciences.

The institute also has a Pharmacology Research Associate Program—its only intramural activity—in which postdoctoral scientists with an interest in pharmacology or related sciences conduct research in NIH or FDA labs.

Integral to NIGMS's workforce development efforts is its dedication to increasing diversity. Two NIGMS programs focused on this goal—the Minority Access to Research Careers program and the Minority Biomedical Research Support program—are marking their 40th anniversaries this year.

symposia and other activities at scientific meetings. These range from a day-long symposium at the American Chemical Society's national meeting to student poster awards at the annual Biomedical Research Conference for Minority Students and the annual meeting of the Society for Advancement of Chicanos and Native Americans in Science.

On Oct. 17, the institute will hold a special 50th anniversary DeWitt Stetten, Jr., Symposium with a trio of speakers who reflect the breadth of its mission. The event will also feature presentations by a dozen poster award winners.

As an expression of its interest in science education, NIGMS will host Cell Day, an interactive web chat room modeled on NHGRI's DNA Day. During the Nov. 2 event, NIGMS scientists will answer middle and high school students' questions about cell biology and research careers.

NIGMS staff members have chosen the 50th anniversary as a time to give back to the community. In April, the institute sponsored a week-long blood drive, with donations going to the NIH Blood Bank. And in June, staff collected and delivered nonperishable food items to the Edmond J. Safra Family Lodge.

As NIGMS reflects on its progress over the past five decades, it also looks forward. "Our challenge for the future is to continue to attract and train the best minds and to champion their unfettered creativity," says acting NIGMS director Dr. Judith Greenberg. "And if we do that, we can expect spectacular discoveries ahead." ●



PORTER II

CONTINUED FROM PAGE 1

Above, l:

The new west satellite substation (behind fence) will supply electrical energy to the Porter Neuroscience Research Center and other buildings in its vicinity.

Above, r:

Early casework in PNRC II

Below, l:

Down under. This 30-foot deep trench will accommodate the building's new steam line.

PHOTOS: FRANK KUTLAK, CARLA GARNETT

is now deep into its MEP systems phase, during which the building's utility, communications, security and elevator systems are being installed and tested.

"Tracking MEP installation and commissioning," he said, "the project is beginning the final construction phase before occupancy—the installation of the finishes: walls, ceilings, doors, hardware, lab benches and casework."

The photos accompanying this article offer a peek inside the work in progress.

New developments since the last status report:

■ The central atrium that joins the existing Bldg. 35 with PNRC II now has a 4-story scaffold to provide a working platform known as the "dance floor." It allows workers to install the atrium ceilings and upper walls. The atrium will be finished in stages from the top down by lowering the scaffold.

■ Kutlak estimates reaching occupancy by late fall 2013 to spring 2014. Currently, the logistics team is working with the ICs that will occupy the building to start the activation phase, which involves planning, scheduling, procurement of new furniture and scientific equipment and the moving of existing labs and staff into the new building, he said.

This stage will be more complex, Kutlak explained, because for the first time on NIH's campus, labs and research projects will be organized in "pods or clusters defined by the studies being conducted, instead of by institute or center...We've done this to some degree before in a small way—Porter Phase I and Bldg. 50, for example—but this is the first time we've done it on such a large scale wherein the entire building will be organized that way."

The first priority in scheduling the moves will be

to evacuate 5 Research Court and other leased lab facilities, Kutlak said.

■ A ninth IC has been added to the list of future occupants. The National Center for Complementary and Alternative Medicine is now slated to join NINDS, NIMH, NIDCD, NICHD, NIDCR, NEI, NIA and NIBIB in the new building.

■ A small staff from Events Management will also work in Porter II, as a 200-seat tech-savvy conference center divisible into four seminar rooms will be located on the new building's ground floor.

■ The vivarium will more than double its current size. A delicate dance of precision timing and demolition will have to occur during the occupancy phase, as the vivarium already in use in Porter I will not be shut down for the expansion, which now shares its wall. "We'll have to put up a temporary wall before we take down what's there now," Kutlak said. "Then, we'll take down the tempo-



These two tanks will handle water used in research.



Much of the floor plan inside PNRC II has already been implemented on several floors. Above, Frank Kutlak, project officer, gives a tour of progress.

rary wall, so that the vivarium will be one large united area.”

■ The building’s heating/cooling system could be described as “back to the future.” “Do you remember those old radiators that used to heat houses back in the day?” Kutlak asked. “Well, we’ve installed these new versions of them known as chilled beams that are based on the same concept. Because water is a much more efficient carrier of energy than air, we will be cooling the building by running chilled water through these chilled beams and will greatly reduce the amount of forced air. The concept was developed in Europe and is being adopted more and more in the U.S.”

In addition, PNRC II “will use solar panels and ground source heat pumps, thus recovering energy from the Sun and Earth in order to reduce both energy consumption and greenhouse gas emissions,” explained Dan Wheeland, ORF director. “The end product will be one of the most—if not *the* most—energy-efficient biomedical research laboratories ever constructed.”

■ A related construction project going on near Bldg. 35 that passersby can see is the west satellite substation, a new electrical energy substation that will serve the Porter Neuroscience Research Center complex as well as several other lab buildings in the vicinity. That project, located on South Dr. next to Bldg. 37, is scheduled to be completed in spring 2013.

Also, shuttle bus riders may have noticed a rough patch of roadway recently along Convent Dr., between South and Lincoln Drives. That’s because of a new steam pipeline being constructed under that piece of road. Crews excavated a trench about 30 feet deep under several existing major utilities to accommodate the new steam line that will serve PNRC II. Flag crews helped shuttle buses navigate the re-patched road during the height of the dig.

When finished, PNRC II—which was made possible by American Recovery and Reinvestment Act funds in 2009—will complete the Porter Neuroscience Research Center.



Back to the future. New versions of the old radiators—called chilled beams—will cool Porter II. Above (foreground, top right) are the beams already installed; below, an up-close view.



Porter II To House World’s Strongest MRI **Behold the Future Home of the Mega Magnet**

In the depths of Porter II’s basement, a giant metal-walled tomb (shown at right, top) has been erected. To the untrained eye, it looks like a rusty old room—dark, a bit spooky and...empty. But in fact, the room will house the world’s strongest research magnetic resonance imaging (MRI) device, according to PNRC II Project Officer Frank Kutlak.

“There’s about 365 tons of steel in that shielding box,” he explains. “The walls are up to 14 inches thick. This is a pretty unique feature.”

Someday soon the 20-by-30-foot chamber will contain a 30-ton 18-Tesla animal MRI device, which is about 300,000 times stronger than Earth’s magnetic field. The PNRC II design includes a special shaft (r, bottom) to permit the magnet to be lowered into the basement.

In addition, a 9-Tesla magnet will be also located in the MRI suite.



BERMAN

CONTINUED FROM PAGE 1



Berman described her experiences vividly and with good humor. “I want good quality of life for as long as possible and bad quality of life for as short as possible,” she said. “I call it the Niagara Falls trajectory: good, good, good, good—drop off the cliff.”

PHOTOS: BILL BRANSON

Medicine: Mind the Gap series presented by the Office of Disease Prevention, the Office of Research on Women’s Health and NCCAM. She is a nurse and senior program officer at the John A. Hartford Foundation, where she is part of the effort to develop cost-effective models of care that improve health outcomes for older adults. In her talk “Cancer Care: The Patient’s Role, Palliative Care, and Implications for Health Policy,” she described how her experiences can be useful to health care providers, patients and policy makers.

Mind the Gap explores issues at the intersection of research, evidence and clinical practice, especially in areas in which conventional wisdom may be misleading. Berman challenged the conventional wisdom that aggressive treatments are the best for extending life. She chose palliative care for its ability to maintain her quality of life, but palliative care can extend life, as well, she said. Since her diagnosis, Berman’s treatment has consisted of a daily pill and a monthly infusion. It is not the right choice for every situation, but it was right for her, she said.

Berman described her experiences vividly and with good humor. “I want good quality of life for as long as possible and bad quality of life for as short as possible,” she said. “I call it the Niagara Falls trajectory: good, good, good, good—drop off the cliff.”

Health care providers rarely ask patients about their treatment goals, but they should, Berman said. She chose her treatment after reviewing the medical literature and consulting with her oncologist, who asked what she hoped to gain from treatment.

But a visit with a specialist in inflammatory breast cancer reminded her that many providers are not patient-centered. Without asking what Berman wanted, the specialist announced she should have chemotherapy, a mastectomy, radiation and more chemotherapy. Yet the literature suggests that the treatment recommended by the specialist would not help a person with stage IV inflammatory breast cancer, Berman said. And she questioned the wisdom of a mastectomy when her cancer had already spread to her spine.

Her experience with the specialist is closer to the norm, Berman said. Physicians may not feel comfortable with the complex discussions required to help patients who are facing

a terminal illness clarify their goals. But well-informed patients make better decisions, leading to better care at lower cost. As an example, Berman said that Massachusetts General Hospital provided a more realistic sense of end-of-life care choices by showing patients a video of the ICU. Most people who saw it chose to spend their final days at home.

It is important for providers to communicate clearly with people who are ill; this does not interfere with hope, Berman said. And providers should ask patients how much information they want. In some cases, patients may prefer not to hear bad news, although they may want it relayed to a family member.

Providers should also encourage end-of-life planning, including appointing a health care proxy and having ongoing conversations with their proxies. These conversations give the proxy a firm understanding of the patient’s wishes at each step of illness and ease the proxy’s burden of making end-of-life choices. Berman also said that patients need to update advance directives as their illness progresses.

Berman believes patients should consider hospice care for the final months, not just the final days. Hospice provides an important range of services, including spiritual counseling for the patient and family.

Dr. Paul Coates, then acting director of the Office of Disease Prevention, ended the 90-minute session by thanking Berman for sharing her personal story and insights into health care.

“You informed, you educated, you challenged and you touched our hearts,” he said. 🍷

Hispanic Heritage Month Program Set, Sept. 20

Dr. Nitza M. Cintrón, University of Texas Medical Branch, will be the keynote speaker at NIH’s 2012 Hispanic Heritage Month observance on Thursday, Sept. 20 from 11 a.m. to noon in Masur Auditorium, Bldg. 10. Cintrón is a former project scientist for the Space Shuttle program’s Spacelab mission. Dr. Carlos Zarate of NIMH will give opening remarks. Sign language interpreters will be provided. Individuals with disabilities who require reasonable accommodation to participate should contact Gerard Roman at (919) 541-3430, through the Federal Relay Service at 1-800-877-8339, or via email roman@od.nih.gov.



At a steering committee meeting of the NICHD Global Network for Women's and Children's Health Research are (from l) HHS Secretary Kathleen Sebelius, network scientific director Dr. Linda Wright, NICHD deputy director Dr. Yvonne Maddox and NICHD director Dr. Alan Guttmacher.

Sebelius Addresses NICHD Global Network

"The world's health is not a zero-sum game," Health and Human Services Secretary Kathleen Sebelius said to researchers in the NICHD Global Network for Women's and Children's Health Research. "What benefits one nation, benefits us all."

Sebelius spoke at the network's annual steering committee meeting held recently. Established by NICHD and the Bill and Melinda Gates Foundation, the network seeks to prevent maternal and infant deaths and illnesses worldwide. Scientists from developing countries, together with those in the United States, lead teams that identify the health needs of an area and address those needs through randomized clinical trials to test treatments and interventions.

Sebelius commended network researchers on their efforts, which included both a study that found a low-cost drug to treat severe bleeding in women who have just given birth and successful training of health workers to resuscitate newborns.

She urged attendees to communicate their findings to health officials in developing countries and to work with governments to create strong research partnerships. Sebelius also asked the network to take on new challenges, such as finding ways to eliminate indoor air pollution from cooking fires and to combat water-borne diseases.

"There's no wiser investment we can make than one in mothers and children," she said.

OSE Hosts New Science Education Series

The Office of Science Education is hosting a new seminar series about science education—the NIH Science Education Conversations Series. It will include topics ranging from how to help your child navigate the school system to how to implement findings from research about the science of education. Each discussion will be held in Bldg. 50, Rm. 1328/1334 at 3 p.m.

OSE director Dr. Bruce Fuchs was inspired to organize these seminars by the 5-year strategic plan for science education currently being drafted by the White House Office of Science and Technology Policy. "This is a way to let the NIH community know what is happening with the plan and how different agencies are moving forward," he said. "We plan to tap into other agencies such as NASA and NSF, as well as various think tanks and universities, to get their perspectives on how to reform science education."

Dr. Kathy Mann Koepke, a program officer in the Child Development and Behavior Branch, NICHD, serves on the planning committee for the series because she wanted to increase collaboration within NIH on science and math education research. "It is my hope that the seminar will bring together people with similar interests from different areas," she said. "Program officers have a big responsibility to fill gaps in the science and this is one way to help move that forward."

She also hopes to increase awareness of the learning and reasoning research conducted at NIH. "Few people realize how important math and science cognition are to health, well-being and daily life," Mann Koepke said. "I hope the public will come to recognize NIH as a leader in this field."

The first four speakers have been selected.

On Sept. 27, Rodger Bybee, director emeritus of the Biological Sciences Curriculum Study, will discuss "Thinking Differently about How We Teach Science: Why Should NIH Care, and What Can NIH Do?"

On Oct. 25, Justin Halberda, associate professor in the department of psychological and brain sciences at Johns Hopkins University, will discuss "Basic Cognition for Numbers: Potential Impacts in the Science Classroom."

On Nov. 29, Shirley Malcom, head of education and human resources at AAAS, will discuss "Bringing Underrepresented Populations into the Sciences: What Difference Does Difference Make?"

On Dec. 20, Daniel M. Levin, visiting assistant professor in the College of Education at the University of Maryland, will discuss "Attending to Student Thinking in Science: Becoming a Responsive Teacher."

Additional dates in the series are: Jan. 17, Feb. 28, Mar. 28, Apr. 25 and May 23. For more information, visit <http://science.education.nih.gov/sciedconversations>.



Scientists have found that calorie restriction does not extend years of life or reduce age-related deaths in a 23-year study of rhesus monkeys.

Study Finds Calorie Restriction Does Not Affect Survival

Scientists have found that calorie restriction—a diet consisting of approximately 30 percent fewer calories but with the same nutrients of a standard diet—does not extend years of life or reduce age-related deaths in a 23-year study of rhesus monkeys. However, calorie restriction did extend certain aspects of health. The research, conducted by scientists at the National Institute on Aging, was reported in the Aug. 29 online issue of *Nature*.

Calorie restriction research has a long history. The first finding came in the 1930s, when investigators observed that laboratory rats and mice lived up to 40 percent longer when fed a calorie-restricted diet. Subsequent research has cited calorie restriction as extending lifespan of yeast, worms, flies and some strains of mice. But other studies have not shown a longevity benefit. For example, in studies of certain strains of mice, calorie restriction on average had no effect on lifespan. Some of these mice actually had a shorter lifespan when given a calorie-restricted diet. To date, research does not provide evidence that calorie restriction is an appropriate age regulator in humans, the NIA investigators point out. Currently, limited human studies are under way to test the effectiveness and safety of calorie restriction in people.

The “results suggest the complexity of how calorie restriction may work in the body,” said NIA director Dr. Richard Hodes. “Calorie restriction’s effects likely depend on a variety of factors, including environment, nutritional components and genetics.”

Protein Linked to Increased Risk of Heart Failure, Death in Older Adults

A protein known as galectin-3 can identify people at higher risk of heart failure, according to new research supported by the National Heart, Lung, and Blood Institute. The research is based on work from NHLBI’s Framingham Heart Study, which began in 1948 and has been the leading source of research findings about heart disease risk factors.

“Galectin-3, a Marker of Cardiac Fibrosis, Predicts Incident Heart Failure in the Community,” was published online Aug. 29 in the *Journal of the*

American College of Cardiology and will appear in the Oct. 2 print issue.

Heart failure occurs when the heart cannot fill with enough blood and/or pump enough blood to meet the body’s needs. Galectin-3 has recently been associated with cardiac fibrosis, a condition in which scar tissue replaces heart muscle, and cardiac fibrosis plays an important role in the development of heart failure.

Heart failure carries enormous risk for death or a lifetime of disability and often there are few warning signs of impending heart failure. Measuring levels of galectin-3 in the blood may offer a way to identify high-risk individuals who could benefit from treatments to prevent debilitating heart failure and death. Early identification of predisposed individuals would allow treatment to begin long before heart failure develops and could help people at high risk for heart failure to live longer, more active lives.

Stresses of Poverty May Impair Learning Ability In Young Children

The stresses of poverty—such as crowded conditions, financial worry and lack of adequate child care—lead to impaired learning ability in children from impoverished backgrounds, according to a theory by a researcher funded by NIH. The theory is based on several years of studies matching stress hormone levels to behavioral and school readiness test results in young children from impoverished backgrounds.

Further, the theory holds, finding ways to reduce stress in the home and school environment could improve children’s well-being and allow them to be more successful academically.

High levels of stress hormones influence the developing circuitry of children’s brains, inhibiting such higher cognitive functions such as planning, impulse and emotional control and attention. Known collectively as executive functions, these mental abilities are important for academic success.

Dr. Clancy Blair of New York University concludes that this altered stress response and its effect on executive function helps to explain one way in which poverty affects children’s development of school readiness skills and later classroom performance.

Although poverty is considered a major source of stress, the findings also suggest that other sources of stress may affect children in all income groups—for example, from divorce, harsh parenting or struggles with a learning disability.

The research was described in the September/October issue of *Scientific American Mind*, in an article by Blair.

NIDDK's Garfield Retires After Career Devoted to Diabetes Prevention

By Joan Chamberlain

Dr. Sanford A. "Sandy" Garfield has retired from NIDDK after 25 years dedicated to overseeing studies to improve the treatment and prevention of type 2 diabetes in high-risk groups. Among the many projects he oversaw, the Diabetes Prevention Program stands out as a milestone in clinical research for showing that type 2 diabetes can be slowed or prevented by cutting calories and increasing physical activity.

Garfield devoted nearly two decades of his career to working on the design, implementation and analysis of results for the DPP and its follow-up study. "The announcement of the trial's findings in 2001 marked just the first step in the complex process of implementing the DPP approach on a wide scale," he says. He now works with the Centers for Medicare and Medicaid Services and the Centers for Disease Control and Prevention to help managed care organizations deliver the DPP's lifestyle intervention to patients at high risk for type 2 diabetes.

During his career, Garfield also worked on major initiatives to reduce the high rate of diabetes in American Indians and Alaska Natives. As director of NIDDK's Diabetes Education in Tribal Schools Program, he coordinated the development of an innovative set of teaching tools to increase the understanding of science, health and diabetes among Native American students from kindergarten through grade 12. The curriculum, "Health Is Life in Balance," integrates science and Native American traditions to educate students about science, diabetes and its risk factors and the importance of nutrition and physical activity.

"I'll never forget the moving ceremony at the National Museum of the American Indian when community leaders enveloped Sandy in a traditional blanket to recognize the important role he's played in improving the health of the American Indian people," recalled Dr. Judith Fradkin, director of NIDDK's Division of Diabetes, Endocrinology and Metabolic Diseases. "His work has had immense consequences for stemming the tide of diabetes with a focus on the most vulnerable American populations."

Garfield taught anatomy at the University of Virginia School of Medicine and the University of Cincinnati College of Medicine before joining NIDDK in 1987. He earned a Ph.D. in biology at the University of Chicago in 1974, which he followed with post-doctoral studies at Case Western Reserve University.

After retirement, he plans to tackle a long reading list and immerse himself in the neglected joys of music while continuing to oversee the Diabetes Prevention Program Outcomes Study part time.



For his work to prevent diabetes among American Indians, Dr. Sandy Garfield was honored in 2003 with a sacred tribal blanket that symbolizes security, warmth and guidance, according to a tribal leader.



BRAD Program participants included (front, from l) Dr. Della White, NICHD; Juliette Cagigas, Whittier College; Dr. Elaine Trudelle-Jackson, Texas Woman's University; Kagiso Sebina, University of Botswana; NICHD deputy director Dr. Yvonne Maddox; Dr. Georgina Odaibo, University of Ibadan; Rahel Bisetegn, Addis Ababa University; Dr. Regina James, NICHD. At rear are (from l) Dr. Reiko Toyama, NICHD; Dr. Ann Sebanc, Whittier College; Thokozile Mashaah, University of Zimbabwe; Sergio M.R. Moormahomed, Eduardo Mondlane University; Shem Wakaindha, Makerere University; Nadia Tagoe, Kwame Nkrumah University; Ahaz T. Kulanga, Kilimanjaro Christian Medical Centre; Antony Matsika, University of Zimbabwe.

BRAD Trains in Development of Research Infrastructure

Representatives of 11 academic institutions recently completed a 3-week intensive on-campus training program to help their institutions develop the infrastructure needed to successfully compete for NIH extramural grant awards and conduct biomedical and behavioral research studies.

The Biomedical/Biobehavioral Research Administration Development (BRAD) Program is sponsored by the Division of Special Populations at NICHD, NIAID and the Fogarty International Center. BRAD grantees were joined by grantees from FIC's Medical Education Partnership Initiative (MEPI) Program, which supports the development and expansion of medical education and research among institutions in sub-Saharan African countries funded by the President's Emergency Plan for AIDS Relief.

"The idea is to provide an overview of the knowledge base and tools for building strong research administration infrastructures at institutions that traditionally have not been major recipients of NIH research grant funds," said Dr. Jean Flaggs-Newton, coordinator for BRAD residency training.

BRAD is the successor to the domestic and international Extramural Associates Research Development Program, which also provided research training to help institutions develop the infrastructure needed to apply for NIH grants and conduct research.

Representatives of the BRAD grantee institutions were from Whittier College (Calif.); the Institute of Health Sciences, Texas Woman's University; and the College of Health Sciences, the University of Zimbabwe. Representatives of the MEPI institutions were: Makerere University (Uganda), University of Botswana, University of Zimbabwe, University of Ibadan (Nigeria), Kilimanjaro Christian Medical Centre (Tanzania), Eduardo Mondlane University (Mozambique), Kwame Nkrumah University of Science and Technology (Ghana) and Addis Ababa University (Ethiopia).

The NIH residency training component of the BRAD program is designed to help participants understand the NIH structure and program operations, introduce them to NIH grants policy and provide an overview of the tools needed to build strong research administration infrastructures at primarily undergraduate institutions and at emerging research institutions.



HHS assistant secretary for health Dr. Howard Koh acknowledged that advancing prevention is not an easy task and shared his version of a popular quote, "An ounce of prevention is a ton of work."

OBSSR Holds Conference on Health Prevention

The Office of Behavioral and Social Sciences Research, in coordination with the Office of Disease Prevention, recently held a 2-day conference, "Advancing Prevention: Knowledge Gaps and New Partnerships."

The conference featured 130 participants with 18 speakers from academic institutions and federal or state agencies. Participants identified such core needs as an inventory of existing prevention research for enhanced synergy and application, network development for collaboration and design of research methods and approaches that take advantage of developing large-scale data sets.

"The whole country is thinking about health today," said keynote speaker Dr. Howard Koh, HHS assistant secretary for health, referring to the Supreme Court ruling on the Affordable Care Act, which took place that morning. The upholding of the law means that the federal government can move forward with efforts to promote health care prevention strategies. "The health care reform act is a prevention bill," said Dr. Michael McGinnis, senior scholar at the Institute of Medicine and conference moderator.

"Prevention is the future of our country and next generation," said Koh. He discussed cancer prevention and its pivotal role in moving our health care system away from disease treatment and toward disease prevention. Programs such as Healthy People, which started in 1979, and the National Prevention Strategy (2010) advance health promotion and disease prevention and serve as examples for future initiatives aiming to do the same.

"Health starts where people live, labor, learn and play," said Koh. He highlighted four essential goals for the nation's health: improve quality and length of life, achieve health equity and eliminate disparities, create social and physical environments that make health the easiest choice and facilitate prevention across the lifetime.

Koh acknowledged that advancing prevention is not an easy task and shared his version of a popular quote, "An ounce of prevention is a ton of work."

A hot item in the discussion of new technologies these days is mobile health (mHealth). Dr. Michael Lauer, director of NHLBI's Division of Cardiovascular Sciences, highlighted mHealth as a tool to remove collaboration barriers.

"Mobile technologies can break down the silos," Lauer said. There is a need to go beyond simply communicating with public health officials and community leaders to engaging them. One way this can, and has been, done is through mHealth interventions.—Jessica Schwartz and Ann Benner



Tanielian To Give Talk on Promoting Troop Resilience, Sept. 20

The NIH seminar series Medicine: Mind the Gap will feature "Evidence-Informed Factors for Promoting Psychological Resilience in the U.S. Military," by Terri Tanielian, senior research analyst at RAND Corp., on Thursday, Sept. 20, from 10 a.m. to noon in Bldg. 45, balcony A.

Tanielian will discuss the concept of psychological resilience and highlight how the U.S. Department of Defense has implemented programs to promote psychological resilience in an effort to prepare troops and their families for the challenges of deployment. She also will review how these approaches have evolved over the past several years and how the concept of Total Force Fitness is shaping future training and prevention efforts within the military.

Tanielian's areas of research interest include the psychological effects of combat, terrorism and disasters, psychological resilience and suicide prevention, as well as access to, and quality of, behavioral health care for returning veterans.

The talk is presented by the Office of Disease Prevention, Office of Dietary Supplements, NCCAM, NIMH and NIAAA. Sign language interpreters will be provided. Individuals who need reasonable accommodation to participate should contact Paris.Watson@nih.gov, (301) 496-6615.

Graduate Student Research Conference To Be Held, Oct. 9-10

The National Graduate Student Research Conference will be held at the Natcher Conference Center and Lister Hill Auditorium on Oct. 9-10 in conjunction with the NIH Research Festival. A total of 120 advanced graduate students from across the U.S. will come to campus for this NIH-sponsored scientific meeting. NIH investigators and current postdoctoral fellows are encouraged to visit the posters to discuss potential collaborations and new research directions and to learn first-hand about novel techniques and approaches that could enhance their own investigations. For more information visit https://www.training.nih.gov/events/recurring/nih_national_graduate_student_research_festival.